

## Nematron nPC300 Fanless Industrial PC

Non-Display, High Performance Fanless Node PCs

UL/cUL Class I Div 2 Approved

Intel® Fanless Processing

Solid State Drive Storage

55°C Operating Temp

64-bit Application Support

Mounting Options



**Nematron**  
by COMARK

DS nPC300-N2800, Rev B

Optional  
**64-Bit**  
Application  
Support



Made in USA

### Standard Configuration

- |  |  |   |
|--|--|---|
| <ul style="list-style-type: none"> <li>▪ High Performance / Very Low Power Fanless Processor                         <ul style="list-style-type: none"> <li>- Intel® Dual Core ATOM N2800 (1.86 GHz, 1 MB cache, 4 Threads)</li> </ul> </li> <li>▪ 4 GB DRAM</li> <li>▪ 240 GB Easily Removable SATA Solid State Drive                         <ul style="list-style-type: none"> <li>- Optional larger SSD sizes and rotating Hybrid Hard Drive</li> </ul> </li> <li>▪ Extensive I/O Connectivity                         <ul style="list-style-type: none"> <li>- Dual Gigabit (10/100/1000) Ethernet ports</li> <li>- Two USB 2.0 ports</li> <li>- Two USB 3.0 ports</li> <li>- One RS-485/422 serial port</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>- Two RS-232 serial ports</li> <li>- Additional Analog Video port or HDMI port - supports dual video with internal LCD and one port (Optional HDMI to DVI cable available - sold separately)</li> <li>▪ Integrated 100-240 VAC power supply                         <ul style="list-style-type: none"> <li>- 24 VDC optional</li> </ul> </li> <li>▪ UL and cUL Ordinary Locations Listed</li> <li>▪ UL and cUL Hazardous Locations Listed                         <ul style="list-style-type: none"> <li>- Class I Division 2, Groups A, B, C, &amp; D; Class II Division 2,</li> </ul> </li> </ul> | <p>Groups F &amp; G; Class III when mounted in a NEMA enclosure</p> <ul style="list-style-type: none"> <li>▪ FCC &amp; European CE compliant</li> <li>▪ Windows® 7 Professional (32-bit) pre-installed                         <ul style="list-style-type: none"> <li>- Windows 7 Ultimate (32-bit) or No OS installed optional</li> </ul> </li> <li>▪ 2-year Warranty</li> </ul> |
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# Technical Specifications



## Physical

Overall Dimensions	7.750" x 12.00" x 2.15" (196.8mm x 304.8mm x 54.61mm)
Overall Dimensions w/ Mounting Brackets	7.750" x 13.30" x 2.45" (196.8mm x 337.82mm x 62.23mm)
Weight	6.5 lbs (2.9 kg)
Shipping Weight	8.0 lbs (3.6 kg)

## Processor

<sup>1</sup> Additional Video RAM as needed with DVMT (Dynamic Video Memory Technology).

Type & Processor	<b>ATOM N2800</b> Intel Dual Core ATOM N2800
Core Speed	1.86 GHz
Threads / Bus/Core	2 / 4
L2 Cache	1MB
Chipset	Intel NM10 Express
Graphics Controller	Integrated Intel GMA 3650 <sup>1</sup>
Ethernet Controller	Intel 82574L Gigabit 10/100/1000 (2 ports)

## Storage & Peripherals

Operating System	Windows 7 Professional (32-bit); Optional Windows 7 Ultimate (32-bit), or No OS installed
DRAM	4GB Single Module (204-pin DDR3 SO-DIMM, non-ECC, unbuffered, 1066 MHz)
Standard Storage	240GB SATA Solid State Drive; Optional 480GB or 960GB Solid State Drive; 1TB SATA Hybrid Hard Drive <sup>2</sup>
Available I/O	(1) HDMI Port, (2) USB 2.0, (2) USB 3.0, (2) RS-232, (1) RS-485/422, (1) Analog Video Port (supports dual video), (2) Ethernet 10/100/1000 Ports

<sup>2</sup> Hybrid Hard Drives have a solid state adaptive memory cache to significantly increase read/write performance. These are rotating hard drives and do not carry any extra part warranty.

## Power

Input Power	35W
AC Input Voltage	100-240 VAC, 50-60 Hz, 1.0 A Maximum
DC Input Voltage	18-36 VDC, 6.0 A Maximum

# Technical Specifications

## Environmental

Temperature <sup>3</sup>	<b>Operating</b> 0°C to 55°C	<b>Non-operating</b> -20°C to 70°C
Humidity	20% to 80% RH, noncondensing	20% to 80% RH, noncondensing
Shock <sup>4</sup>	15g peak acceleration, 11msec	30g peak acceleration, 11msec
Vibration (5-2000 Hz) <sup>4</sup>	.006" peak to peak displacement, 1.0g maximum acceleration	.015" peak to peak displacement, 2.5g maximum acceleration
Altitude <sup>5</sup>	Sea level to 10,000 feet	Sea level to 40,000 feet

<sup>3</sup> Temperature specifications are for air temp surrounding the unit (i.e. inside any enclosure being utilized). Meets US Federal Requirements specified in 46 CFR 111.01-15 (d) for offshore electrical systems.

<sup>4</sup> Shock & Vibration specifications established with Solid State drives and no rotating media.

<sup>5</sup> Altitude specification is established by using all internal component specifications.

## Compliance

FCC	47 CFR, Part 15, Class A
EU CE Marking	CE, EN 55022: Class A, EN 61000-3-3, EN 61000-6-2, IEC 60950-1
Agency Approvals *	UL508 Listed, ANSI/ISA 12.12.01-2012, cUL Listed CSA C22.2, #142, cUL Listed CSA 22.2, #213

\* nPC-Fanless Series: Class I Division 2, Groups A, B, C, D; Class II, Division 2, Groups F & G; Class III; Temp. Code: T4A, when installed on a flat surface of a Type 1, 4, 4X, or 12 enclosure.

## Features

1. Integral 100-240 VAC or 24 VDC Power Supply
2. UL/cUL 508, Class I Div 2, CE Approvals
3. Easily Removable SATA Solid State Drive
4. Extensive I/O Connectivity
5. USB Retention Bracket
6. Mounting Brackets
7. HDMI Cable Retention Bracket
8. Made with Pride in the USA



Standard 2-year warranty  
- Covers parts and service

# Order Number Generation

**Base unit configuration: nPC300-N2800-4GB-240SS-W7**, includes Intel Dual Core ATOM N2800, 4 GB DRAM, 240 GB SATA Solid State Drive and Windows 7 Professional (32-bit).



## nPC300-N2800

<b>DRAM:</b> _____	
-4GB	4 GB DRAM
<b>Hard Drive:</b> _____	
-240SS	240 GB SATA Solid State Drive <sup>1</sup>
-480SS	480 GB SATA Solid State Drive <sup>1</sup>
-960SS	960 GB SATA Solid State Drive <sup>1</sup>
-HD	1 TB (minimum) SATA Hybrid Hard Drive <sup>2</sup>
<b>Operating System:</b> _____	
-W7	Windows 7 Professional (32-bit)
-W7U	Windows 7 Ultimate (32-bit)
-NOS	No OS installed
<b>Power Supply:</b> _____	
blank	100-240 VAC
-DC	24 Volt DC

<sup>1</sup> Solid State Drive options carry a 5-year (part-only) warranty.

<sup>2</sup> Hybrid Hard Drives have a solid state adaptive memory cache to significantly increase read/write performance. These are rotating hard drives and do not carry any extra part warranty.